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10/018,511	12/14/2001	John W Betteridge	946-445	2636

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EXAMINER	
TUROCY, DAVID P	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,511	BETTERIDGE, JOHN W	
	Examiner	Art Unit	
	David Turocy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-22* is/are allowed.

6)☒ Claim(s) *1-15 and 23-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's preliminary amendments, filed 12/14/2001, have been fully considered and reviewed by the examiner. The examiner acknowledges the amendments of claims 6-11, 14-15, 18-22, and 25-26. Claims 1-26 are pending.

Information Disclosure Statement

2. The information disclosure statement filed 2/12/2002 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. In this instance, no explanation of the relevance of German Patent 580956 has been furnished and therefore the reference has not be considered.

Claim Interpretation

3. Below is a listing of claim language that has invoked 35 USC 112 6th Paragraph and the examiners interpretation of the means-plus-function language as taught by the structure disclosed in the specification. Examiners must interpret a 35 USC 112 6th Paragraph "means-or-step-plus function" limitation in a claim as limited to the corresponding structure, material, or acts described in the specification and equivalents

thereof. See *In re Donaldson Co.*, 16 F.3d 1189, 29 USPQ2d 1845. Therefore the means-plus-function language is interpreted to be limited to the disclosure within the specification, as listed below, or any equivalents thereof.

Claim	Means Plus Function Language	*In re Donaldson Co* Interpretation within Specification
1	Drive means for rotating the rotor and the coating head	Page 7, lines 3-8
1, 16	Means for supplying the coating material from the external source to the gallery	Page 5, lines 12-15
1, 16	Means for applying a positive air pressure to the internal gallery	Page 5, lines 17-20
4	Sealing means	Page 6, lines 4-9
6	Diffusing means	Page 6, lines 20-21
7, 19	Means for supplying a grit from an external source to the gallery	Page 6, lines 15-18
8, 20	Means for supplying a gas from an external source to the gallery	Page 7 line 28 -page 8 line 3
9, 21	Means for supplying a quench fluid from an external source to the gallery	Page 7 line 28 -page 8 line 3
10, 18	Means for opening and closing around the pipe	Page 7, lines 15-16

Claim Objections

4. Claims 5 and 8 are objected to because of the following informalities:

a. Claim 5: There is insufficient antecedent basis for the term, "the sealing means", in claims 1-3. For the purposes of applying art, claim 5 will depend from only claim 4.

b. Claim 8: There is insufficient antecedent basis for the term "the heated gas", in line 4 of the claim. For the purposes of applying art, claim 8, line 1 is going to be interpreted to read "comprising means for supplying a heated gas" Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2: The term "vacuum displacement pump" is vague and indefinite because the examiner cannot ascertain the definition of a vacuum displacement pump and therefore cannot determine the subject matter encompassed by the claim. The disclosure as set forth by the applicant does not supply a definition for such a "pump". In addition there is no art-recognized definition for a vacuum displacement pump. For the purposes of applying art the examiner is going to give "a vacuum displacement pump" its broadest reasonable interpretation. For the purposes of applying prior art, "vacuum displacement pump" will be interpreted to read on everything that effectively transfers a solid, liquid, and/or gas using a vacuum.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 6-10, 12, 14, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application 2285592, hereafter '592, in view of "Sprays" by Kirk-Othmer.

Claim 1: '592 teaches an apparatus for application of a coating material to the exterior surface of a pipe comprising a stator (3) disposed around the exterior surface of the pipe; a substantially annular rotor (5) rotationally disposed within the stator and having a common central axis with the pipe, the rotor having at least one internal gallery extending substantially around the radius of the pipe (15); at least one coating head (7) having an internal passage for the coating material and an opening in close contact with the exterior surface of the pipe, the internal passage connected to the at least one internal gallery (Page 5 – Page 6).

'592 teaches a drive means for rotating the rotor and the at least one coating head around the exterior of the pipe, whereby the drive means includes a sprocket wheel (33) connected to a motor (35) via a shaft to deliver rotational power to the rotor (Figure 2, Page 31-35). It is the examiners position that the drive means as disclosed by '592 is equivalent to the drive means as discussed in the instant application because both perform the identical function, rotating a rotor within a stator, and a person of

ordinary skill in the art would have recognized the interchangeableness of the element shown in '592 for the corresponding element within the instant application. See *Lockhead Aircraft Corporation v. United States* 193 USPQ 449.

'592 teaches a means for supplying the coating (15) material from an external source to the at least one internal gallery, whereby the coating material is supplied through an external pipe (17).

'592 fails to teach a means for applying positive air pressure to the at least one internal gallery, whereby the coating material is forced by air pressure through the at least one internal gallery and ejected onto the exterior surface of the pipe through the at least one coating head.

However, "Sprays" by Kirk-Othmer, teaching of known chemical spray processes, discloses using an air atomizing spray is utilized in industry during such processes as spray coating, spray painting, quenching, and spray drying processes (Table 2, page 688).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '592 to use the air atomizing spray as suggested by "Sprays" by Kirk-Othmer to provide a desirable spray coating on the external surface of a pipe because "Sprays" by Kirk-Othmer discloses air atomizing spray processes are known in the art to provide spraying coatings and therefore would reasonably be a coating on the external surface of a pipe. The examiner acknowledges Kirk-Othmer does not explicitly define air atomizing as a vacuum displacement pump. However, giving a vacuum displacement pump its broadest reasonable interpretation, air

atomizing reads on a vacuum displacement pump because as the compressed air contacts the coating material, a vacuum is created to draw the material into the compressed air, therefore "pumping", or transferring, the liquid through the passageway into the nozzle.

Claim 6: '592 teaches at least one coating head has a diffusing means within the internal passage of the at least one coating head (Figure 1).

Claims 7-9: '592 teaches a means for applying a grit, gas, and/or fluid from an external source to the at least one internal gallery and means for applying positive air pressure to the at least one internal gallery (Page 7, lines 15-21). Claims directed to apparatus must be distinguished from the prior art in terms of structure rather then function See *In re Danly* 120 USPQ 528,531.

Claim 10: '592 teaches the stator and the rotor include a means for opening and closing around the pipe, such as two split or hinged members (Page 6, lines 10-14).

Claim 12: '592 teaches a method for applying a coating to the exterior surface of a pipe comprising supplying a positive air pressure to the stator, transferring the coating material to the gallery within the rotating element around the pipe and then ejecting the coating material onto the pipe (Figure 1, Page 5-6).

Claim 14: '592 teaches applying a positive air pressure gas onto the surface of the pipe (Page 7, lines 15-21).

Claim 23: '592 teaches supplying at a positive air pressure a coating material into an intake chamber (17), a compression chamber (15), a diffusion chamber (25), and then ejecting to the exterior of the pipe (Figures 1 and 2).

Claim 25: '592 teaches applying a positive air pressure gas onto the surface of the pipe (Page 7, lines 15-21).

6. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application 2285592, hereafter '592 in view of "Sprays" by Kirk-Othmer, and further in view of "Coating processes" by Kirk-Othmer.

Claims 2 and 3: '592 in view of "Sprays" by Kirk-Othmer teaches all the limitations of these claims as discussed above in the 35 USC 103(a) rejection, however, they fail to teach providing a pressure feed pump attached to the stator with two ports, one connected to the coating material and the second connected to compressed air.

However, "Coating processes" by Kirk-Othmer teaches during an air atomizing process, an external source of compressed air is supplied to atomize the coating material (Page 664). "Coating processes" by Kirk-Othmer discloses providing an external-mix nozzle, where the atomized air and the coating material are mixed in a space before the nozzle (Page 664).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify '592 in view of "Sprays" by Kirk-Othmer to use the compressed air

and material ports with a pump as suggested by "Coating processes" by Kirk-Othmer to provide a desirable air atomized spray coating because "Coating processes" by Kirk-Othmer discloses providing compressed air and material together in an area near the nozzle is known in the art to provide air atomization of a coating material and therefore would reasonably be expected to effectively provide air atomizing a coating on the exterior of a pipe.

Claim 4: '592 discloses an annular seal extending around the support from to prevent unwanted coating material from escaping (Page 5, line 17).

Claim 5: '592 in view of "Sprays" by Kirk-Othmer, and further in view of "Coating processes" by Kirk-Othmer teaches providing atleast one compressed air port to the stator, which provides a positive pressure within the stator and therefore provides a positive air pressure on the sealing means.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application 2285592, hereafter '592 in view of "Sprays" by Kirk-Othmer, and further in view of the US Patent 4595607 by Betteridge et al, hereafter '607.

'592 in view of "Sprays" by Kirk-Othmer teaches all the limitations of these claims as discussed above in the 35 USC 103(a) rejection. '592 also discloses induction heating prior to the application of the coating material (Page 1, line 17). However, they

fail to disclose including at least one magnetic induction heater to heat the pipe prior to placement of the coating material.

However, '607, teaching of a method for coating pipe weld joints, discloses including magnetic induction heaters to concentrate the induction heating effects towards the pipe being heated (Column 3, lines 17).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify '592 to use the magnetic induction heater suggested by '607 to provide a desirable heating of the pipe prior to coating because '592 teaches induction heating prior to coating the exterior of a pipe and '607 teaches magnetic induction heaters concentrate the heating effects onto the surface to be heated.

8. Claims 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application 2285592, hereafter '592 in view of "Sprays" by Kirk-Othmer, and further in view of the US Patent 5191740 by Rose, hereafter '740.

'592 in view of "Sprays" by Kirk-Othmer teaches all the limitations of these claims as discussed above in the 35 USC 103(a) rejection, in addition, '592 discloses blast cleaning prior to coating the exterior of the pipe (Page 1, line 16). However, they fail to disclose ejecting grit onto the exterior of the pipe from the coating heads.

However, '740, teaching of a method of blast cleaning the exterior of a pipe, including providing a stator around the exterior of the pipe and nozzles to eject grit to clean the surface (abstract, Figure 2). '740 discloses providing grit blasting to roughen

the surface in order to provide a strong bond between the pipe and the coating (Column 1, lines 33-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '592 to use the ejecting of grit to clean the pipe as suggested by '740 to provide a desirable cleaning of a pipe prior to coating because '740 discloses ejecting grit from a nozzle attached to a stator around the circumference of the pipe is known in the art to provide roughening of the pipe resulting in a strong bond between the coating and the pipe and therefore would reasonably be expected to effectively provide effective blast cleaning prior to coating in the process of '592.

9. Claims 15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Application 2285592, hereafter '592 in view of "Sprays" by Kirk-Othmer, and further in view of US Patent 5026451 by Trzecieski et al, hereafter '451.

'592 in view of "Sprays" by Kirk-Othmer teaches all the limitations of these claims as discussed above in the 35 USC 103(a) rejection. '592 discloses water quenching after coating the exterior of the pipe (Page 1, line 18). In addition '592 discloses other fluids may be applied using the apparatus (Page 7, line 20). However, they fail to disclose ejecting a quenching fluid onto the exterior of the pipe from the coating heads.

However, '451, teaching of a method and apparatus for coating pipes, discloses spraying a quenching fluid onto the surface of the coated pipe (Figure 7). '451 teaches the quecning fluid cools the coating to form a hard outer surface (Column 2, lines 40-44).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify '592 to spray of quenching fluid from the nozzles as suggested by '451 to provide a desirable coating on the exterior surface of the pipe because '592 teaches spraying fluids onto the surface of the pipe through the coating heats and '451 teaches spraying a quenching fluid onto the exterior of a pipe hardens the coating.

Allowable Subject Matter

10. Claims 16-22 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art cited or reviewed by the examiner teaches an apparatus for applying a coating to the exterior surface of a pipe with an annular shaped body with a entry point, a intake chamber, a compression chamber, a diffusing chamber, and a gallery with an interchangeable sleeve, with one or more openings to the gallery, against the inner circumferential side of the annular shaped body placed around the outside of a pipe.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AU 1762

TIMOTHY MEEKS
PRIMARY EXAMINER